



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 6103:2014

# Bonded abrasive products - Permissible unbalances of grinding wheels as delivered - Static testing (ISO 6103:2014)

**I.S. EN ISO 6103:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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EUROPEAN STANDARD

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Supersedes EN ISO 6103:2005

English Version

## Bonded abrasive products - Permissible unbalances of grinding wheels as delivered - Static testing (ISO 6103:2014)

Produits abrasifs agglomérés - Balourds admissibles des meules en état de livraison - Contrôle statique (ISO 6103:2014)

Schleifkörper aus gebundenem Schleifmittel - Zulässige Unwucht von Schleifscheiben im Lieferzustand - Statische Prüfung (ISO 6103:2014)

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**EN ISO 6103:2014 (E)**

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## **Foreword**

This document (EN ISO 6103:2014) has been prepared by Technical Committee ISO/TC 29 "Small tools" in collaboration with Technical Committee CEN/TC 143 "Machine tools - Safety" the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6103:2005.

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### **Endorsement notice**

The text of ISO 6103:2014 has been approved by CEN as EN ISO 6103:2014 without any modification.

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# INTERNATIONAL STANDARD

**ISO  
6103**

Fourth edition  
2014-10-01

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## **Bonded abrasive products — Permissible unbalances of grinding wheels as delivered — Static testing**

*Produits abrasifs agglomérés — Balourds admissibles des meules en  
état de livraison — Contrôle statique*



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## ISO 6103:2014(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

This fourth edition cancels and replaces the third edition (ISO 6103:2005), which has been technically revised to introduce the following significant changes:

- a) the scope has been amended with respect to minimum outside diameters;
- b) the normative references to ISO 603 series have been deleted;
- c) types of bonded abrasive products for hand-held grinding machines in [Table 1](#) have been amended;
- d) diameter ranges in [Table 1](#) have been corrected;
- e) a bibliography has been added.

# Bonded abrasive products — Permissible unbalances of grinding wheels as delivered — Static testing

## 1 Scope

This International Standard specifies the maximum permissible values of unbalances for bonded abrasive wheels with an outside diameter  $D \geq 125$  mm and maximum operating speed  $v_s \geq 16$  m/s, in the as-delivered condition.

It also specifies the method for measuring the unbalance and the practical method for testing whether a grinding wheel is acceptable or not.

This International Standard is applicable to bonded abrasive wheels in the as-delivered condition.

This International Standard is not applicable to

- diamond, cubic boron nitride or natural stone grinding wheels, or
- centreless control wheels, lapping and disc wheels, ball wheels or glass grinding wheels.

NOTE 1 The values given refer to the grinding wheel itself, independent of any unbalance which may exist in the balancing arbor or in the means of fastening it to this arbor. These various elements, together with the flanges or hub-flanges, are assumed to be balanced, homogeneous and free from geometrical defects.

NOTE 2 The effects of unbalance are basically

- additional stresses on the arbor, the machine and its mounting,
- excessive wear of the bearings,
- vibration prejudicial to the quality of machining and increased internal stresses in the grinding wheel, and increased operator fatigue.

## 2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 2.1

#### **unbalance**

product of radius and mass

Note 1 to entry: Radius is expressed in millimetres. Mass is expressed in grams. The product of radius and mass is expressed in grams multiplied by millimetres.

### 2.2

#### **intrinsic unbalance of a grinding wheel**

$U_i$

product of the mass  $m_1$  of the grinding wheel and the distance  $e$  between its centre of mass G (centre of gravity) and the axis O of its bore

Note 1 to entry: See [Figure 1](#).

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